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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,282	03/26/2002	Tamotsu Ikeda	09812.0437	5189
22852 7590 07/18/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER NGUYEN BA, HOANG VU A	
			ART UNIT 2623	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/089,282	<b>Applicant(s)</b> IKEDA ET AL.	
	<b>Examiner</b> Hoang-Vu A. Nguyen-Ba	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 22-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to the amendment filed April 11, 2007.
2. Claims 24-44 are now pending. Claims 24, 27, 34, 40 and 44 are independent claims.

#### ***Response to Amendment***

3. Per Applicants' request, Claims 1-23 have been canceled and new claims 24-44 have been added.
4. The objection to the specification because of the identified minor informalities is withdrawn in view of Applicants' amendments to the Title, Abstract and the Specification.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 24-44 have been considered but are moot in view of the new ground(s) of rejection presented herein.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 24, 27, 31, 34-35 and 38-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriya in view of Japanese Publication No. 05-090908 by Shuji (cited in Form PTO-1449 filed on March 26, 2002 by Applicants).

#### Claim 24

Noriya discloses at least a *digital broadcasting system* (see at least FIGs. 1-2, 14, 17-18), *comprising*:

*a transmitter that transmits a first transport stream in a first service area* (see at least FIG. 1), *the first transport stream including*:

*links between first programs in the first transport stream and second programs in one or more transport streams in one or more adjacent service areas* (see at least FIG. 1, item 27), and

*a receiver that selects a program being transmitted in one of the adjacent service areas using the links* (see at least FIG. 2 and [0035-0037], [0039], [0043-0047]).

Noriya does not specifically disclose *priorities for the links*. However, Shuji, in an analogous art, teaches a mobile broadcast receiver ([0003], lines 14-16) that can “select a selection program pair whose reception state is excellent with high priority and improve the channel selection operation by selecting the channel selection program pair registered with the priority sequentially in response to the reception state” (see Abstract: Purpose).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the receiver of Noriya to operate as that of Shuji for the purpose of improving the reception of broadcast signals.

#### Claim 27

Noriya discloses at least *a digital broadcasting transmitter* (see at least FIGs. 1, 17) *comprising:*

*a multiplexer unit* (see at least FIG. 1); *and*

*a system controller* (see at least FIG. 1, device 25), *wherein the multiplexer unit and the system controller provide a first transport stream in a first service area* (e.g., output of circuit in FIG. 1), *the first transport stream including:*

*links between first programs in the first transport stream and second programs in one or more transport streams in one or more adjacent service areas* (see at least FIG. 1, device 27).

Noriya does not specifically disclose *priorities for the links*. However, Shuji, in an analogous art, teaches a mobile broadcast receiver ([0003], lines 14-16) that can “select a selection program pair whose reception state is excellent with high priority and improve the channel selection operation by selecting the channel selection program pair registered with the priority sequentially in response to the reception state” (see Abstract: Purpose).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the transmitter of Noriya to specify links with priority to be transmitted to the receiver of Shuji for the purpose of improving the reception of broadcast signals.

### **Claim 31**

The rejection of base claim 27 is incorporated. Noriya further discloses *the multiplexer unit and the system controller* (see at least FIG. 1). Noriya does not specifically disclose that the multiplexer and the system controller *rank the links based on the priorities*. However, Shuji, in an analogous art, teaches ranking the links based on the

priorities (see at least Abstract: Constitution, “[w]hen the reception state is wrong, the priority is decreased by one rank...and the processing is terminated”; [0004]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the transmitter of Noriya to rank links based on priority and to transmit these links to the receiver of Shuji for the purpose of improving the reception of broadcast signals.

### Claim 34

Noriya discloses at least *a digital broadcasting receiver* (see at least FIG. 2 and [0035-0037], [0039], [0043-0047]) *comprising:*

*extracting means for extracting, from a first transport stream in a first service are:*  
*links between first programs in the first transport stream and second*  
*programs in one or more transport streams in one or more adjacent service areas*  
*([0035-0037], [0039], [0043-0047]).*

Noriya does not specifically disclose selection means for selecting a program in one of the adjacent service areas *based on the links and the priorities when the receiver moves into the adjacent service area*. However, Shuji, in an analogous art, teaches a mobile broadcast receiver ([0003], lines 14-16) that can “select a selection program pair whose reception state is excellent with high priority and improve the channel selection operation by selecting the channel selection program pair registered with the priority sequentially in response to the reception state” (see Abstract: Purpose).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the receiver of Noriya to operate as that of Shuji for the purpose of improving the reception of broadcast signals.

### Claim 35

The rejection of base claim 34 is incorporated. Noriya does not specifically disclose *detection means for detecting a location of the receiver, wherein the selection means selects the program based on the location*. However in an analogous art, Shuji teaches a mobile broadcast receiver that can tune in automatically to a target program in order to improve the reception of signals when a vehicle with the receiver moves away from the area with good signal reception (see at least [0003]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the receiver of Noriya to operate as that of Shuji for the purpose of improving the reception of broadcast signals.

### Claim 38

The rejection of base claim 34 is incorporated. Noriya further discloses:

*first receiver means for receiving the first transport stream* (see at least FIG. 18, PAT – Program Association Table); and

*second receiver means for searching, using the selection means, for the program* (see at least FIG. 18, PMT – Program Map Table).

### Claim 39

The rejection of base claim 34 is incorporated. Noriya further discloses *wherein the selection means searches the links in order of the priorities*. However, Shuji, in an analogous art, teaches a mobile broadcast receiver ([0003], lines 14-16) that can “select a selection program pair whose reception state is excellent with high priority and improve the channel selection operation by selecting the channel selection program

pair registered with the priority sequentially in response to the reception state” (see Abstract: Purpose).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the receiver of Noriya to operate as that of Shuji for the purpose of improving the reception of broadcast signals.

#### Claim 40

Noriya discloses at least *a digital broadcasting receiver* (see at least FIG. 2 and [0035-0037], [0039], [0043-0047]), *comprising:*

*extracting means for extracting, from a first transport stream in a first service area between first programs in the first transport stream and second programs in one or more transport streams in one or more adjacent service areas ([0035-0037], [0039], [0043-0047]).*

*selection means for determining priorities for the links using the links and for selecting a program in one of the adjacent service areas based on the priorities when the receiver moves into the adjacent service area.*

However, Shuji, in an analogous art, teaches a mobile broadcast receiver ([0003], lines 14-16) that can “select a selection program pair whose reception state is excellent with high priority and improve the channel selection operation by selecting the channel selection program pair registered with the priority sequentially in response to the reception state” (see Abstract: Purpose).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the receiver of Noriya to operate as that of Shuji for the purpose of improving the reception of broadcast signals.



#### **Claim 41**

The rejection of base claim 40 is incorporated. Noriya further discloses *wherein the selection means determines the priorities using a history of moving the receiver among the adjacent service areas* (see at least [0051]).

#### **Claim 42**

The rejection of base claim 40 is incorporated. Noriya does not specifically disclose *wherein the selection means determines the priorities using a pre-defined ranking of the adjacent service areas*. However, Shuji, in an analogous art, teaches ranking the links based on the priorities (see at least Abstract: Constitution, “[w]hen the reception state is wrong, the priority is decreased by one rank...and the processing is terminated”; [0004]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the transmitter of Noriya to rank links based on priority and to transmit these links to the receiver of Shuji for the purpose of improving the reception of broadcast signals.

#### **Claim 43**

The rejection of base claim 40 is incorporated. Noriya does not specifically disclose *wherein the selection means determines the priorities using the number of links for each adjacent service area*. However, Shuji, in an analogous art, teaches ranking the links based on the priorities (see at least Abstract: Constitution, “[w]hen the reception state is wrong, the priority is decreased by one rank...and the processing is terminated”; [0004]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the transmitter of Noriya to rank links based

on priority and to transmit these links to the receiver of Shuji for the purpose of improving the reception of broadcast signals.

#### Claim 44

Noriya discloses at least *a method for digital broadcasting, comprising:*

*generating a first transport stream including a link descriptor, the link descriptor:*  
*describing programs offered in second transport streams in adjacent service*  
*areas (see at least FIG. 1; the claimed link descriptor being interpreted*  
*as device 27), and*  
*transmitting the first transport stream (see at least e.g., output of circuit in*  
FIG. 1).

Noriya does not specifically disclose *including priorities of the second transport streams, each priority indicating an order for replacing the first transport stream with each second transport stream*. However, Shuji, in an analogous art, teaches a mobile broadcast receiver ([0003], lines 14-16) that can “select a selection program pair whose reception state is excellent with high priority and improve the channel selection operation by selecting the channel selection program pair registered with the priority sequentially in response to the reception state” (see Abstract: Purpose).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the transmitter of Noriya to specify links with priority to be transmitted to the receiver of Shuji for the purpose of improving the reception of broadcast signals.

8. Claims 25-26, 28-30 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriya in view of Japanese Publication No. 05-090908 by Shuji, further in view of Specification for Service Information (SI) in Digital Video Broadcasting (DVB) Systems ("DVB").

#### **Claim 25**

The rejection of base claim 24 is incorporated. The Noriya-Shuji combination does not specifically disclose *wherein the transmitter describes the links and the priorities using a link descriptor in at least one of a network information table, a service description table, and an event information table*. However, these claimed features are disclosed in DVD as standards (see pp. 1, 3-4, 7-8 et seq.).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use these standards in the Noriya-Shuji combination for the purpose of processing the SI at transitions between delivery media boundaries and thus minimizing the access time when switching between channels (DVB, p. 13).

#### **Claim 26**

The rejections of base claim 24 and intervening claim 25 are incorporated. The Noriya-Shuji combination does not specifically disclose *wherein the transmitter identifies the priority of each link in a linkage\_type field or in a private\_data\_byte field in the link descriptor*. However, DVB discloses these features at p. 41.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use these linkage descriptors and type coding in the Noriya-Shuji combination for the purpose of processing the SI at transitions between

delivery media boundaries and thus minimizing the access time when switching between channels (DVB, p. 13).

### **Claim 28**

The rejection of base claim 27 is incorporated. Noriya further discloses *wherein the multiplexer unit and the system controller include the links* (see at least FIG. 1).

Furthermore, Noriya-Shuji combination discloses *the priorities* (see rejection in claim 27). The Noriya-Shuji combination does not specifically disclose the links and priorities to be included *in a network information table in the first transport stream*. However, the claimed feature is disclosed in DVB at pp. 1, 3-4, 7-8 et seq.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the DVB standards in the Noriya-Shuji combination for the purpose of processing the SI at transitions between delivery media boundaries and thus minimizing the access time when switching between channels (DVB, p. 13).

### **Claim 29**

The rejection of base claim 27 is incorporated. The Noriya-Shuji combination further discloses *wherein the multiplexer unit and the system controller include the links and the priorities*. The Noriya-Shuji combination does not specifically disclose the links and priorities to be included *in a service description table in the first transport stream*. However, the claimed feature is disclosed in DVB at pp. 1, 3-4, 7-8 et seq.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the DVB standards in the Noriya-Shuji combination for the purpose of processing the SI at transitions between delivery media boundaries and thus minimizing the access time when switching between

channels (DVB, p. 13).

### **Claim 30**

The rejection of base claim 27 is incorporated. Noriya-Shuji combination further discloses *wherein the multiplexer unit and the system controller include the links and the priorities*. The Noriya-Shuji combination does not specifically disclose the links and priorities to be included *in an event information table in the first transport stream*. However, the claimed feature is disclosed in DVB at pp. 1, 3-4, 7-8 et seq.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the DVB standards in the Noriya-Shuji combination for the purpose of processing the SI at transitions between delivery media boundaries and thus minimizing the access time when switching between channels (DVB, p. 13).

### **Claim 32**

The rejection of base claim 27 is incorporated. The Noriya-Shuji combination further discloses *wherein the multiplexer unit and the system controller include the links and the priorities*. The Noriya-Shuji combination does not specifically disclose the links and priorities to be included *in a link descriptor in at least one of a network information table, a service description table, and an event information table*. However, the claimed feature is disclosed in DVB at pp. 1, 3-4, 7-8 et seq.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the DVB standards in the Noriya-Shuji combination for the purpose of processing the SI at transitions between delivery media boundaries and thus minimizing the access time when switching between

channels (DVB, p. 13).

### Claim 33

The rejections of base claim 27 and intervening claim 32 are incorporated. The Noriya-Shuji combination further discloses *wherein the multiplexer unit and the system controller identify the priority of each link..* The Noriya-Shuji combination does not specifically disclose the multiplexer and system controller identify the link priorities *in a linkage\_type field or in a private\_data\_byte field in the link descriptor.* However, DVB discloses these features at p. 41.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use these linkage descriptors and type coding in the Noriya-Shuji combination for the purpose of processing the SI at transitions between delivery media boundaries and thus minimizing the access time when switching between channels (DVB, p. 13).

9. Claims 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriya in view of Japanese Publication No. 05-090908 by Shuji, further in view of Specification for Service Information (SI) in Digital Video Broadcasting (DVB) Systems ("DVB") and further in view of News from Rohde & Schwarz ("R&S"), Measurements in MPEG1 and DVB-T signals, Number 168, 2000.

### Claim 36

The rejections of base claim 34 and intervening claim 35 are incorporated. The Noriya-Shuji-DVB combination does not specifically disclose *wherein the detection means detects the location using a global positioning system.* However, R&S discloses at p. 32

1<sup>st</sup> para. that based on GPS, the Megaframe Initialization Packet (MIP) inserter introduces all important sync data into the transport stream (TS), which is then sent to all transmitters in a network (FIG. 1) for the purpose of synchronizing individual transmitters in the network.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the R&S teaching in the Noriya-Shuji-DVB combination for the purpose of synchronization of the signals to be transmitted, thereby improving the reception of the transmitted signals by a receiver.

### Claim 37

The rejections of base claim 34 and intervening claim 35 are incorporated. The Noriya-Shuji-DVB combination does not specifically disclose *wherein the detection means:*

*receives input of location information; and*  
*determines the location using the location information.*

However, R&S teaches the TS MUX 1 receiving input GPS 1 (FIG. 1) for the purpose of synchronization of SFN with MIP parameters.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the R&S teaching in the Noriya-Shuji-DVB combination for the purpose of synchronization of the signals to be transmitted, thereby improving the reception of the transmitted signals by a receiver.

### Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hoang-Vu A. Nguyen-Ba whose telephone number is (571) 272-3701. The Examiner can normally be reached on Tuesday - Friday from 7:00 – 17:30.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist: 571-272-2600.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Anthony Nguyen-Ba". The signature is fluid and cursive, with the first name "Anthony" being more prominent and the last name "Nguyen-Ba" following in a similar style.

ANTONY NGUYEN-BA  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2100

July 6, 2007